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## FALCONER ON THE REPUTED FOSSIL MAN OF ABBEVILLE.

SIR,—The asserted discovery of a fossil human jaw at Abbeville has already been noticed in *The Times*; it has been the subject of a communication to the Royal Society, and at the present moment it is exciting the most lively interest in the scientific circles of both England and France. Having passed a couple of days at Abbeville with M. Boucher de Perthes closely examining all the circumstances of the case, and having been entrusted by him with some of the specimens, which I have now by me here, I am in a position to throw some light on the subject. The case, as a whole, presents one of the most subtle instances of perplexed evidence on a point of science that has come under my experience, and is well worthy of a hearing from the lesson of caution which it inculcates.

Fashioned flint weapons, unquestionably of very remote antiquity, and as certain proofs of human agency as the watch in the illustration of Paley, have turned up in surprising abundance in the old gravel beds of Amiens and Abbeville, but hitherto not a vestige of the bones of the men who shaped them into form. Why it should be so has remained a mystery; for human bones are as enduring as those of deer, horse, sheep, or oxen, and fossil bones of extinct animals are not unfrequent in the Somme Valley deposits. At last it was thought that the objects so long sought for in vain had been discovered. To pass over minor incidents, on the 28th of March, M. de Perthes was summoned to the gravel-pit of Moulin-Quignon (described by Mr. Prestwich in his memoir in the *Philosophical Transactions*) to examine, *in situ*, what appeared to be a portion of bone projecting from the cliff of the section, close to its base—(*L'Abbeillois*, *Avril* 9). The specimen was carefully detached with his own hands by M. de Perthes, and proved to be the entire half of an adult human lower jaw, quite perfect, and containing one back tooth—namely, penultimate, or last but one. The sockets of the other teeth were all present, and filled with matrix, with the exception of the antepenultimate, the socket of which was effaced, the tooth having been lost during life. The solitary molar present was hollow from caries, and crammed with matrix.

The deposit from which the jaw was extracted is the “black seam flinty gravel,” so called from its intensely dark (blueish-black) colour, arising from oxides of iron and manganese. It rests immediately upon the chalk, and belongs to what Prestwich calls the “high level” series, being the oldest of the Somme Valley beds. A thin cake of black mangano-ferruginous clayey matter is interposed between the chalk and the gravel. If the jaw proved to be authentic, and came out of the alleged position, it indicated man, by an actual bone, at a period of extremely remote antiquity. The appearance of the jaw was entirely in keeping with the matrix—*i. e.*, dark coloured and fairly covered with a layer of it. A single detached human molar was found at the same time, corresponding exactly in appearance and matrix; and, to complete the case, a flint hatchet, covered with black matrix, was extracted from the same spot by M. Oswald Dimprie, who ac-

accompanied M. de Perthes. These details are all given in the *Abbeville* of the 9th inst.

Two practised experts, Mr. John Evans and Mr. Prestwich, preceded me on the 11th inst. to Abbeville, and their suspicions were instantly aroused. They pronounced the flint hatchets to be modern fabrications. I followed on the 14th, and got three of them out of the "black seam gravel," covered with matrix, and having every external appearance of reliability; but, on severely testing them on my return to London, they all proved to be spurious. M. Quatrefages, member of the Institute, and the eminent professor of Anthropology in the Jardin des Plantes, got two of them in my presence from the same spot on the 15th inst. What they have proved to be I know not as yet, but I anticipate the same results. The number which turned out was marvellous, but the *terrassiers* were handsomely paid for their findings, and the crop of flint-hatchets became in like degree luxuriant.

Now for the jaw itself. What complexion of intrinsic evidence did it yield? The craniological materials available at Abbeville for comparison were, of course, very limited; but the specimen presented a series of peculiarities which are rarely seen *in conjunction* in the jaws of European races, ancient or recent. Here I must be a little technical. 1. The posterior margin of the ascending ramus was extremely reclinate, so as to form a very obtuse angle with the ascending ramus. 2. The ascending ramus was unusually low and broad. 3. The sigmoid notch, instead of yielding an outline somewhat like a semicircle, was broad, shallow, and crescentiform. 4. The condyle was unusually globular; and, 5, what was most remarkable of all, the posterior angle presented what I may venture to call a *marsupial* amount of inversion. The first three characters suggested to M. Quatrefages—if I may venture to cite him for a preliminary impression and not a judgment—the recollection of something corresponding in the jaws of Esquimaux, while the fifth character suggested to me the recollection of what I had seen in the jaw of an Australian savage. Neither of us had at hand the materials requisite for a satisfactory comparison, but the combination of characters above alluded to struck us both as sufficiently remarkable to demand serious examination. M. Quatrefages departed for Paris, taking the jaw with him, while I returned to London, bringing drawings and a careful description with measurements of the principal specimen, and M. de Perthes confided to me the detached molar. I may add that the jaw specimen, although professing to have been yielded from below a heavy load of coarse flints, presented no appearance of having been crushed or rolled; and that, making allowance for the crust of matrix enveloping it, the bone was light, and not infiltrated with metallic matter. The condyle washed yielded a dirty white colour.

As to the result, I have as yet no authentic information of the final conclusions which have been arrived at in Paris. My friends, Mr. Busk, F.R.S., and Mr. Tomes, F.R.S., both practised anthropologists, gave me their assistance in my part of the inquiry. The former, like M. Quatrefages and myself, was struck with the odd conjunction of unusual characters presented by the jaw, and speedily produced a lower jaw of the Australian type, brought by Professor Huxley

from Darnley Island, which yielded the same kind of *marsupial* inversion, so to speak, with a nearly corresponding form in the reclinate posterior margin, ascending ramus, and sigmoid notch. But Mr. Tomes's abundant collection brought the matter speedily to a point. From the pick of a sackful of human lower jaws, yielded by an old London churchyard, he produced a certain number which severally furnished all the peculiarities of the Abbeville specimen, *marsupial* inversion inclusive, although not one of them showed them all in conjunction. We then proceeded to saw up the detached molar found at Moulin-Quignon. It proved to be *quite* recent; the section was white, glistening, full of gelatine, and fresh looking. There was an end to the case. First, the flint hatchets were pronounced by highly competent experts (Evans and Prestwich) to be spurious; secondly, the reputed fossil molar was proved to be recent; thirdly, the reputed fossil jaw showed no character different from those that may be met with in the contents of a London churchyard. The inference which I draw from these facts is that a very clever imposition has been practised by the *terrassiers* of the Abbeville gravel pits—so cunningly clever that it could not have been surpassed by a committee of anthropologists enacting a practical joke. The selection of the specimen was probably accidental; but it is not a little singular that a jaw combining so many peculiarities should have been hit upon by uninstructed workmen.

The break down in this spurious case in no wise affects the value of the real evidence, now well established, but it inculcates a grave lesson of caution.

H. FALCONER, M.D., F.R.S.

(From *The Times* of the 25th April.)

### Miscellanea Anthropologica.

*Blätter für Gerichtliche Anthropologie*, vol. vi, 1856 (Journal of Forensic Anthropology), vol. vi, 1856. On Subjective Light, in relation to Forensic Anthropology.

SEILER (*Nenke's Zeitschrift*, 1839) relates the case of a clergyman who was attacked by two robbers in a pitch-dark night. A severe blow on the right eye caused such an evolution of subjective light, that he was able to recognize one of his assailants.

The question is of some importance in medical jurisprudence, namely, whether the sparks or rays of light, the usual results of pressure on the optic nerve, may, in some particular cases, enable a person clearly to perceive external objects in complete darkness, a question on which physiologists are by no means agreed.

Krügelstein (*Nenke, Zeits.*, 1845) cites a case in which a witness said, "I saw sparks fly from his eye" (the assaulted); here it was an objective light, as a third person saw the evolution of light.

It is related of Tiberius and Cardanus that they could read in the dark immediately on awakening. (Suetonius, *Vit. Tib.*, cap. 68; Plinius, *Hist. Nat.*, lib. xi, cap. 37; Cardanus, *De Subtilitate*, lib. xii.)

Lanzius knew a young man who could see and read in the greatest darkness.